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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/900,411 | 07/06/2001 | Kazim Ozbaysal | 13DV14050 | 5957 |

31316 7590 03/26/2003

GREGORY GARMONG
P.O. BOX 12460
ZEPHYR COVE, NV 89448

EXAMINER

WEESMAN, ANDREW E

| ART UNIT | PAPER NUMBER |
|----------|--------------|
|----------|--------------|

1742

DATE MAILED: 03/26/2003

10

Please find below and/or attached an Office communication concerning this application or proceeding.

AS/10

| | | |
|------------------------------|------------------------------|------------------|
| Office Action Summary | Application No. | Applicant(s) |
| | 09/900,411 | OZBAYSAL, KAZIM |
| | Examiner Andrew E Wessman | Art Unit 1742 |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 23 December 2002.

2a) This action is **FINAL**. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-21 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) Claim(s) _____ is/are allowed.

6) Claim(s) 1-21 is/are rejected.

7) Claim(s) _____ is/are objected to.

8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) The proposed drawing correction filed on _____ is: a) approved b) disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some * c) None of:

1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) The translation of the foreign language provisional application has been received.

15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

| | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) 9. | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-21 remain for examination.
2. The new rejection under 35 U.S.C. 112, 1st paragraph, set forth below, was necessitated by applicant's arguments.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 1-21 are rejected under 35 U.S.C. 112, first paragraph, as based on a disclosure which is not enabling. The type of cooling for the alloy, critical or essential to the practice of the invention, but not included in the claim(s) is not enabled by the disclosure. See *In re Mayhew*, 527 F.2d 1229, 188 USPQ 356 (CCPA 1976). In the claims, applicant claims a cooling rate "that does not exceed 15°F per second", and also refers to this as slow cooling, but does not provide the type of cooling used to obtain this cooling rate. The examiner argued that such a cooling rate would be found in air cooling or furnace cooling, and that cooling rate was inherent to processes specifying such a type of cooling. Applicant has contested that point, saying that such a cooling rate would not necessarily imply that the cooling was air cooling or furnace cooling, or that such cooling methods would not inherently have such a cooling rate. However, if applicant's argument is taken to be true, than it is unclear what kind of cooling one of ordinary skill in the art would apply to the alloy in order to obtain the claimed cooling rate, and there is no enabling disclosure in the specification that would cause one of

Art Unit: 1742

ordinary skill in the art to be aware of the proper cooling to use. Because it is unclear how one would arrive at the claimed cooling rate, if air cooling or furnace cooling do not necessarily so as argued, one of ordinary skill in the art would not be sufficiently enabled by the disclosure to practice the claimed invention.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1, 4-6, 8, 9, 12, 13, 16, 17, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over ASM Handbook Vol. 2.

ASM Handbook Vol. 2 is applied to the claims for the reasons set forth in paper No. 6, paragraph 3.

7. Claims 2, 3, 14, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over ASM Handbook Vol. 2 in view of Ruckle et al.

ASM Handbook Vol. 2 in view of Ruckle et al. is applied to the claims for the reasons set forth in paper No. 6, paragraph 4.

8. Claims 7, 10, 11, 18, 20, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over ASM Handbook Vol. 2 in view of Whang.

ASM Handbook Vol. 2 in view of Whang is applied to the claims for the reasons set forth in paper No. 6, paragraph 5.

Response to Arguments

9. Applicant's arguments filed December 23, 2002 have been fully considered but they are not persuasive. In the remarks, applicant argues:

- (1) The reference does not teach using the specific cooling rate of less than 15°F per second
- (2) There is no reason to combine forging with the heat treatment; and
- (3) There is no reason to combine the references because they teach different processing steps for the titanium alloys.

With regards to applicant's argument (1), ASM Handbook 2, page 618, specifically sets forth that air or furnace cooling should be used instead of water or oil quenching in order to prevent inducing residual stresses into the alloy, particularly in the temperature range of from 600 to 900°F. Furnace and air cooling are slow cooling methods that are frequently used in the art to prevent introduction of residual stresses in alloys as they cool, and such slow cooling would take place at less than 15°F per second, which is a moderate cooling rate. Even if the same cooling rate is used from the 1600°F reheat temperature to room temperature, which is not required, the cooling rate of the claimed invention, 15°F per second, would cool the alloy from the reheat temperature to room temperature in less than 2 minutes, while the air cooling and furnace cooling of the ASM Handbook reference are typically conducted over a period of at least a few minutes, if not a few hours, and therefore the cooling rates of the ASM Handbook would be expected to be less than 15°F per second.

With regards to applicant's argument (2), forging is commonly used in the metallurgical arts in order to form alloy workpieces into a useable shape, and it would be obvious to combine forging of an alloy with any other treatment processes that do not make forging of the alloy impossible. Because ASM Handbook, Volume 2 also teaches forging temperatures that are substantially the same as the heat treating temperature, the limitations of the claimed invention are taught by the prior art.

With regards to applicant's argument (3), the teachings of Ruckle et al. are cited to show that similar alloys are known in the art to be used in similar products with similar final dimensions. There is no evidence to suggest that the different heat treatments used by ASM Handbook Volume 2 and Ruckle et al. would render the alloy useless for this task, and therefore the rejection is maintained. I can also be argued that the use of the process for making compressor blades of certain dimensions is an intended use, which is afforded little patentable weight.

Conclusion

Applicant's arguments necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

Art Unit: 1742

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew E Wessman whose telephone number is (703)305-3163. The examiner can normally be reached on Monday through Friday, 8:00am to 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on (703)308-1146. The fax phone numbers for the organization where this application or proceeding is assigned are (703)872-9310 for regular communications and (703)872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0661.

AEW
March 24, 2003


ROY KING
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700